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ET DOCUMENTALISTES AGRICOLES

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DEVELOPMENT OF AGRICULTURAL LIBRARIES AND INFORMATION CENTRES IN INDIA UNDER THE THIRD FIVE-YEAR PLAN¹

BY

N. N. CHATTERJI (*New Delhi*)

Against allocations of Rs. 357 crores² and Rs. 610 crores for agriculture in the First and Second Plans respectively, the proposed allocation for agriculture in the Third Plan is Rs. 1200 crores. Top priority has been assigned, in the Third Plan, to agronomy and food problems. Since research always plays a vital role in the solution of problems, it has been suggested that at least Rs. 100 crores should be set apart for research projects. But technical information emanating from well organized libraries is the life blood of the success of research projects. Accordingly, as recommended by the Seminar on Work-flow in University and College Libraries held under the auspices of the University Grants Commission at New Delhi in March 1959, it has been suggested that 6 $\frac{1}{4}$ per cent of this amount that is, a sum of about Rs. 6 crores should be made available for the development of agricultural libraries and information centres, during the Third Plan.

Introduction

So far as the basic approach of the plans is concerned the First Plan gave top priority to agriculture, whereas in the case of the Second Plan, emphasis has been on the industrial base.

But in the mean time chronic food shortage resulting in starvation and drainage of crores of rupees has been persisting. The position, in fact, is getting worse and worse day by day, owing to the huge rise in population at the alarming rate of two per cent per year. The leading economists have, therefore, been pressing that the Third Plan must once again concentrate on agriculture.

The Third Plan which has been proposed to be of the magnitude of Rs. 10,000 crores, has actually assigned top priority to agronomy and food problems. Official thinking is believed to favour a provision of Rs. 1,200 crores in the Third Plan for the implementation of

¹ Reprinted by permission from Special Bulletin no. 1 of IASLIC [Indian Assoc. of Special Libraries & Information Centres].

² A crore = 10,000,000.

agricultural and animal husbandry schemes. Allocations for agriculture in the successive plans are as follows: —

	<i>Amount</i>	<i>% of total</i>
First Plan ..	Rs. 357 Crores	15.1
Second Plan ..	Rs. 510 Crores	11.3
Third Plan ..	Rs. 1,200 Crores	12

It is necessary that planning should be made for the utilization of this huge sum of money in the most effective manner. A target of 110 million tons for food production under the Third Plan has been tentatively proposed by the Planning Commission's working group on agriculture. This will mean doubling of the food output over the first two plans. The Ford Foundation team of experts has also suggested the same target. The following targets of increase over the present figures for livestock products have been proposed: milk from 4 oz. to 6 oz. per day per head; eggs from 2.9 to 4.5 million per year; and fish from 12.33 lakh tons to 20 lakh tons per year.

But in a country where both the national income and per capita income have been steadily increasing, it cannot merely be the problem of achieving the targets set in the field of foods and livestock products only. The net rise in national income and per capita income has been of the order of 10.4% and 8.3% respectively, during the first three years of the Second Plan, that is, 1956-57 to 1958-59. With the progressive increase in the national and per capita income during the Third Plan, the standard of living of the masses will considerably go up. The masses will not be content with cereal diets merely. They will increasingly seek for more balanced diets consisting of proteins, fats, fruits and vegetables. Thus it is a question of increasing the production of fruits and vegetables as well. Thus the food problem in India is not only a *quantitative* problem of increasing the food production but is also a *qualitative* problem of satisfying the nutritional requirements of a balanced diet.

Another aspect to be borne in mind is that factories must also be fed with adequate raw materials such as cotton, jute, wood, sugarcane, oilseeds and others.

To meet the situation, increase in production per acre and also increase in yield of milk etc. will have to be achieved. At the Hyderabad session, the Congress resolved that by the end of the Third Plan, there should be cent percent increase in the present yield. Presently, for all the crops, we have the lowest yield per acre in the world. It is reported that, in China, from each acre of land the production has increased from 3 to 8 times the previous yield.

Need for Research

The following steps are required to be taken to solve the knotty

food problem: (1) fuller irrigation facilities; (2) supply of improved varieties of seeds; (3) rational use of farmyard manures, green manures, composts, chemical fertilizers; (4) control of insect pests and diseases which damage and devastate crops; (5) use of agricultural implements; (6) a scientific system of crop rotation; and (7) storage and preservation of foods and others crops. These steps call for organized agricultural education and extensive research, fundamental and applied. Results of these researches have also to be made known to farmers so that agronomy can be practised in the most scientific and effective manner. For the success of these two steps, organized library services and information centres are of vital necessity. No real research on economic lines can be carried on in the absence of organized libraries and information services.

The scope of research in agronomy is very vast as it is closely linked up with several other branches of science. An idea of the scope can be gained by studying the set up of the Indian Agricultural Research Institute (I.A.R.I.), New Delhi which is indicated below:

Set up of I.A.R.I.

1. *Division of Agronomy*. Sections: (1) Soil Fertility; (2) Fertilizers and manures; (3) Cultivation; (4) Weed control; (5) Varietal Trials; (6) Seed Distribution; (7) Intensive Cultivation; (8) Agronomic Experiments; (9) Agrostology; (10) Agricultural Economics and Statistics; (11) Cattle Breeding and Management.

2. *Division of Agricultural Engineering*. Sections: (1) Cultivating and Processing Implements; (2) Water Lifts; (3) Push Carts and Wheel Barrows; (4) Scythes.

3. *Division of Botany*. Sections: (1) Plant Breeding and Genetics; (2) Cytology and Cytogenetics; (3) Crop Physiology; (4) Systematics; (5) Botany and Plant Introduction.

4. *Division of Horticulture*. Sections: (1) Vegetables; (2) Fruits.

5. *Division of Soil Science and Agricultural Chemistry*. Sections: (1) Agricultural Chemistry; (2) Soil Chemistry; (3) Micronutrients; (4) Soil Survey; (5) Physical Chemistry; (6) Organic Chemistry; (7) Biochemistry; (8) Microbiology; (9) Radioactive Investigations in Soil Fertility.

6. *Division of Entomology*. Sections: (1) Systematic Entomology; (2) Insect Parasitology; (3) Ecology; (4) Toxicology.

7. *Division of Mycology and Plant Pathology*. Sections: (1) Plant Pathology; (2) Antibiotics; (3) Physiology of Fungi; (4) Fungicides; (5) Bacterial Diseases; (6) Virus Diseases; (7) Systematic Mycology.

This schedule by no means exhausts the whole domain of research

projects connected with agronomy. It extends also to irrigation, agricultural meteorology, land reclamation etc.

Need for libraries and information services

Any amount wisely spent on research programmes is a profitable investment, for the amount thus spent pays off rich dividends in terms of successful solution of problems facing food production. It is, therefore, necessary that a substantial portion of the amount of Rs. 1,200 crores proposed to be allocated for agriculture, in the Third Plan, is diverted to meet the cost of research projects. This amount should at least be Rs. 100 crores. It is reasonably believed that as much as half of the work performed in research laboratories, consists of collecting pertinent information from the recorded literature. This means that about 50 per cent of the research is carried out in the libraries. In other words technical libraries and information services contribute about 50 per cent towards research. The Seminar on Work-flow in University and College Libraries, held under the auspices of the University Grants Commission at New Delhi in March, 1959, has suggested that $6\frac{1}{4}$ per cent of the total budget should be spent on libraries. The same recommendation should hold good for research projects as well. On this basis, a sum of about Rs. 6 crores should become available for developing agricultural libraries and information services.

Present position and developments suggested

There are at present eight central institutes relating to agronomy, namely, Indian Agricultural Research Institute, New Delhi; Rice Research Institute, Cuttack; Potato Research Institute, Simla; Indian Veterinary Research Institute, Izatnagar; National Dairy Research Institute, Karnal; Central Inland Fisheries Research Station, Barrackpore (West Bengal); Central Marine Fisheries Research Station, Mandapam Camp, Madras; and Forest Research Institute, Dehra Dun.

Then there are the Indian Council of Agricultural Research and 17 institutions and organizations under the Central Commodity Committees covering plant industry, jute, coconut, areca nut, tobacco, lac, sugarcane and oilseeds. There are also about 45 agricultural and veterinary colleges. Besides these, there are about 481 agricultural research stations and 81 animal husbandry research stations spread all over India.

The eight central institutes have fairly well organized libraries. Under the Third Plan, all these institutes will undergo considerable expansion. New sections will be added and scores of new research schemes will be undertaken. The scope and activities of the libraries connected with these institutes have to be considerably enlarged, especially in respect of documentation and information services, to

meet successfully the needs of the increasing research activities. Lack of adequate shelving space and staff is a major problem for most of these libraries. Any bottleneck at the library level will seriously hamper research activities which are to contribute to the solution of the food problem. Fortunately, the authorities are now evincing great interest in the development of libraries. For instance, side by side with the raising of Indian Agricultural Research Institute to the status of University for awarding M.Sc. and Ph. D. degrees, a scheme for the expansion of the library of the Institute costing several lakhs of rupees has also been accepted.

Several of the institutes connected with the various Commodity Committees do not have well organized libraries. They do not even have trained librarians, although these libraries are expected to play an important role. It is hoped that the authorities concerned will seek to organize libraries and information services under trained librarians by the end of the Third Plan. The parallel to the Indian Council of Agricultural Research (I.C.A.R.) in India, is the Commonwealth Agricultural Bureaux (C.A.B.) in Britain; the various Commodity Committees under I.C.A.R. are the parallels to the Commonwealth Bureau of Soil Science, Commonwealth Bureau of Field Crops and others under C.A.B. These Bureaux undertake extensive indexing and abstracting services in their respective fields. This is not being done in India. This work based on the British pattern of decentralization should start immediately. The I.C.A.R. should function as a central body for 'residual inquiries', document reproduction and translation services. At present the Indian National Scientific Documentation Centre undertakes document reproduction and translation services in the whole field of science. But in view of the large demand made on this centre by other scientific and technical institutes, supply of translations and reproduced documents is considerably delayed.

I.C.A.R. may also undertake to organize the union catalogue of acquisitions in the various agricultural libraries. Compilation of this catalogue is very important. In view of the huge output of agricultural literature, it will be financially impossible to build up self contained libraries. Hence the resources of the various agricultural libraries have to be pooled and a dynamic communication programme and inter-library loan service have to be introduced. Success of this programme depends upon the knowledge of location of resources. This knowledge can be gained only through reference to the union catalogue.

Most of the libraries connected with the agriculture and veterinary colleges are in a deplorable state. They lack in materials, space and trained staff. Some of them are, however, teaching-cum-research institutes and have good libraries. But even they need to be reorganized and very much expanded to meet the requirements of an ex-

panded programme of research. In his 'Report on Library and Bibliographical Services for Agricultural Teaching and Research in India', Dr. Ralph Shaw of U.S.A., Library Consultant, Indian Council of Agricultural Research in 1957, has made specific recommendations for improving the services of the agricultural and veterinary college libraries. Two of them are concerned with making the libraries run on open access principle and keeping them open for at least eleven hours daily. These recommendations should be implemented without any more delay. This will of course mean more man power. In this connection another point has to be taken into consideration. A large number of publications is being continuously added to these libraries through the courtesies of the organizations like T.C.M., Wheat Loan Agreement, Rockefeller Foundation and others. Unless these useful publications are thoroughly processed for use, they will be lost to research workers. For this purpose again extra man power will be required. The expenditure should be worked out in detail and met by the various State governments under the Third Plan schemes for agronomy.

Hardly any of the state departments of food and agriculture has a library worth the name. This is a serious omission and the sooner this is rectified the better. Results of research are scattered over various publications. Unless these publications are acquired and properly organized under trained librarians, it will not be possible for these departments to get necessary information for solving the day-to-day problems and for efficiently serving the farmers. These libraries will be mainly concerned with popularizing agricultural knowledge amongst the farmers. Albeit most of the farmers are not literate now, in view of the successful literacy drive, planning has to be made on the assumption that most of the farmers will become literate in the near future.

For quickness of service, these departments should organize a library-cum-information centre in each district. These district libraries should frequently organize book exhibitions, film shows, lectures and debates. Since it may not be possible for the farmers living in remote and isolated villages to make use of the district libraries, mobile libraries should be organized to serve them.

The 481 agricultural research stations and 81 animal husbandry research stations are not expected to have parallel libraries in view of the cost involved. They have to depend mostly upon their parent institutions for their requirements in respect of literature. But even so, for efficient running of these stations, all the pertinent abstracting and indexing journals, reference publications and at least all the

pertinent publications of I.C.A.R. and other Indian organizations should be procured. These sub-stations may also be effectively used as information centres for the benefit of research workers and farmers. It is accordingly necessary that trained librarians are appointed at these research stations as well.

For implementation of the suggestions for development, adequate space, equipment and furniture and above all, man power will be necessary. Details as to space, furniture and equipment will vary from institute to institute and will have to be worked out separately for separate institutes. With regard to man power, in respect of trained librarians, an analysis of requirements is given below:

Sl. No.	Type of Institutions	Staff required for each Institution	Total requirement
1.	8 Central Institutes	6	48
2.	17 Commodity Institutes	5	85
3.	45 Colleges	2	90
4.	562 Research Stations	1	562
5.	14 State Agricultural libraries	4	56
6.	300 District and other libraries	1	300
Total			<u>1,141</u>

The total number of trained librarians required for the development of agricultural libraries and information centres will thus be about 1,150. In respect of both scope and man power, development of agricultural libraries will easily outweigh all other types of technical libraries and information centres. On an average about 50 new hands will have to be recruited annually. Accordingly, in any programme for training of technical librarians, training of librarians for agricultural libraries and information centres should receive special consideration.

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COMMUNICATIONS TO MEMBERS

DR. VITTORIO CAMERANI

For the first time our Bulletin has to report the death of a prominent member, who from early life was extremely interested and active in international library affairs. It was with deep regret that I learnt of the death in Rome, on 8 April 1961, of Dr. Vittorio Camerani, after an illness of two months.

Having had the privilege of working with Dr. Camerani for nearly sixteen years of my professional career I feel that I should tell the members of our organization, especially the younger generation, something about the professional life of an international civil servant, who was engaged in agricultural librarianship for practically the whole of his career. For details of his life before I made his acquaintance I am indebted to his brother, Dr. Sergio Camerani, Director of the State Archives in Florence.

Vittorio Camerani was born in Ancona, Italy on 9 May 1898 and studied first at schools in Ancona and later in Cesena, whence his parents originated. The first occasion on which he became acquainted with and attracted by library work was when he was employed as one of the first cataloguers of the library of his uncle, Nazzareno Trovanelli, which was donated to the famous Bibliotheca Malatestiana.

In 1925 he graduated in Humanities from the University of Florence and then attended the School of Archivists and Palaeographers at the same university, which was directed by Carlo Battisti. The university proposed him in 1927 for a library position at the International Institute of Agriculture in Rome, which was then undergoing a re-organization with funds supplied by the Rockefeller Education Board. The library was at that time directed by the American librarian, James Goodwin Hodgson, who later returned to the United States where he worked for many years at the Colorado State College of Agriculture. After a short trial period Camerani was established as chief of the acquisitions section of the library.

A few years later he had the opportunity of widening his professional experience by a period of training at the Library School of the University of Michigan at Ann Arbor, which was then under the direction of one of the outstanding American librarians of the time, Dr. Bishop. After the departure of Mr. Hodgson I assumed the directorship of the Institute's library and was instrumental in arranging an exchange of librarians between the Institute and the Deutsche Bücherei in Leipzig. Dr. Camerani consequently had the opportunity

to spend a year in that great German library, where he made friends with the late Dr. Uhrendahl and his many colleagues.

He married a fellow-librarian, Miss Mara Teodorova, a Bulgarian who was also working in the Institute's library. The difficult years of the second World War caused a good deal of reshuffling in the library. When I had to leave Italy in Autumn 1943 Mrs. Camerani took over the charge of the library, and on her sudden death Dr. Camerani became its director and carried on this responsibility through the years immediately following the war. After a period of uncertainty as to the destiny of the library, which already numbered some 400,000 volumes, it finally became the main part of the newly founded FAO library and Dr. Camerani remained in its service until his death.

Dr. Camerani was an accomplished author and contributed to the professional literature a volume on the public use of libraries, published by Mondadori, which demonstrates his extensive knowledge of library organization and practice in many countries. Another valuable contribution, of more specific interest to agricultural librarians, was the preparation for printing of the library catalogue of the International Institute of Agriculture, a publication made possible by FAO funds, and constituting a massive volume in classified arrangement containing 2747 pages. Another of his contributions to agricultural bibliography is a list of publications on tobacco, which was prepared in co-operation with Dr. Fernandez. It should also not be forgotten that Dr. Camerani participated in the preparation of numerous bibliographical publications issued by the old Institute during my directorship. In recent years he was in charge of the information section of the well-known journal, *Bibliofila*, published by Olschki, Florence. Besides the scientific and editorial activity in which he was engaged for the whole of his professional career, Dr. Camerani was also a teacher of librarianship, being admitted as a lecturer in library science at the University of Rome in 1954, where he continued to hold courses until his death.

The professional qualities which characterize a good librarian he possessed to an outstanding degree. He was imbued with a desire to be helpful to all library users, and was an indefatigable reference librarian always anxious to solve the most difficult bibliographical questions. His excellent knowledge of foreign languages (besides his mother-tongue, Italian, he had a perfect command of English, German and French) enabled him to assist the many readers from foreign countries who visited the Institute's and FAO's library and to help the staff of both institutions.

He was firm in his convictions, frank and sincere in his conversation, open-minded and had a good sense of humour. I personally greatly appreciated his loyalty to me as his former chief and to his

old colleagues of the Institute even in the most discouraging periods of the first post-war years when quite a number of old friendships were forgotten. His faithfulness to the idea of international co-operation to which he was so strongly dedicated found its expression in his membership of IAALD, in which he served loyally from the time when preparations for founding the Association were first initiated.

S. v. Frauendorfer



WAERSA

The editor and publisher of *World Agricultural Economics and Rural Sociology Abstracts* announce that, beginning with volume 3 (1961), the subscription has been reduced from \$ 12.50 to \$ 8.50, a reduction of approximately one third. The new subscription rate in European currencies is as follows: DM 35.20, sfr. 37.-, hfl. 32.-, NF 43.-, £ 3/1/-. The abstract journal is issued quarterly and is published under the auspices of the International Conference of Agricultural Economists by the International Association of Agricultural Librarians and Documentalists. The Editor-in-Chief is Dr. Sigmund v. Frauendorfer, Agrarwirtschaftliches Institut des Bundesministeriums für Land- und Forstwirtschaft, Wien XIII., Schweizertalstrasse 36. Orders for subscriptions should be sent direct to the Publisher: North Holland Publishing Company, 68-70 N.Z. Voorburgwal, Amsterdam, Netherlands.

BIBLIOGRAPHICAL NEWS

New Agricultural Bibliographies

compiled by

Agricultural University Library, Wageningen

With assistance from Mrs. Elisabeth Burch, U.S. Dept. of Agriculture Library, and other members of I.A.A.L.D. (Supplementing the 'Internationales Handbuch der Bibliographien des Landbaues', by Dr. Rudolf Lauche).

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Frequency abbreviations:

<i>bi-en.</i>	biennial	<i>m.</i>	monthly
<i>bi-m.</i>	bimensual	<i>q.</i>	quarterly
<i>f.</i>	fortnightly	<i>w.</i>	weekly
<i>ir.</i>	irregular	<i>y.</i>	yearly
		$\frac{1}{2}y.$	half-yearly

Other abbreviations:

<i>Cont.</i>	continuation, continued	<i>Inst.</i>	Institute, Istituto &c.
<i>Dept.</i>	Department,	<i>Soc.</i>	Society, Société &c.
	Departamento &c.		
	<i>Univ.</i>		University,
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- Grassland*, 1960. Proceedings of the 8th International Grassland Congress, Reading 1960. Reading, the Congress, 1961. Pp. 764; price £ 4.
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- Plant Growth Regulation*, 1959. Plant growth regulation: 4th international conference... [New York, 1959]. Ames, Iowa, Iowa State University Press, 1961. Pp. 850; price \$ 8.50.
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- Soil Fungi*, 1958. The ecology of soil fungi: an international symposium. Edited by D. Parkinson and J. S. Waid. Liverpool Univ. Press, 1960. Pp. 324; price 42s.6d.
- Soil Mechanics*, 1960. Pore Pressure & Suction in Soils Conference, British National Society of the International Society of Soil Mechanics & Foundation Engineering, March 1960. London, Butterworths, 1961.
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- Soil & Water Conservation*, 1958. International Union for Conservation of Nature & Natural Resources. Seventh technical meeting, Athens 1958. Volume 2: Soil & Water Conservation. Bruxelles, [the Union], 1960. Pp. 423. [31 rue Vautier, Bruxelles].

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GENERAL AND PERSONAL INFORMATION

INSTITUTIONS & INDIVIDUALS

Mr. Lars-Erik Sanner has succeeded Mr. Hans Baude as Librarian of the R. Agricultural College, Ultuna, Uppsala, Sweden. Mr. Baude is now Librarian of the Stockholm University of Commerce.

Mrs. Ruby W. Moats, Chief of the Bibliography Division of the U.S. Department of Agriculture Library retired 31 March after 31 years of service in the Library. She had been appointed Chief of the Division after Mrs. Margaret S. Bryant's resignation in September of 1960.

The new Chief of the Bibliography of Agriculture Section is Mr. Ljubo Lulich who was born in Yugoslavia in 1925. He comes to the Department of Agriculture from the U.S. Naval Postgraduate School in Monterey, California, where he was Chief, Technical Services. Mr. Lulich earned his B.A. at the University of California, Berkeley, in 1951 and his M.S. in Librarianship at Drexel Institute of Technology, Philadelphia, Pa. in 1956. He had been on the staff of the Bibliography of Agriculture as a bibliographer from 1956-1958. The staff members are all very happy over the appointment of Mr. Lulich as their new chief.

FORTHCOMING CONGRESSES

Agricultural Economics. 11th International Conference of Agricultural Economists, Cuernavaca, Mexico, 19-30 August 1961. (Mr. J. Ackerman, Farm Foundation, 600, S. Michigan Avenue, Chicago, Ill.)

Cloud Physics. International Conference on Cloud Physics, Canberra and Sydney, 11-21 September 1961. (Dr. E. G. Bowen, Chief, Division of Radio Physics, Commonwealth Scientific and Industrial Research Organisation, 314, Albert Street, Sydney, N.S.W.)

Fisheries. 14th Annual Meeting of the Gulf and Caribbean Fisheries Institute, Miami Beach, 13-17 November 1961. (Mr. James B. Higman, Executive Secretary, The Marine Laboratory, University of Miami, 1. Rickenbacker Causeway, Virginia Key, Miami 49, Florida).

Forestry. 13th Congress of the International Union of Forest

- Research Organisations. Vienna, 9-16 September 1961. (Dipl. Ing. Ormar Bein, Österreich 89, Vienna XIII, Austria).
- Limnology*. 15th International Congress of Limnology, Univ. of Wisconsin, Madison, 20-25 August 1962. Dr. John C. Wright, Birge Hall, Univ. of Wisconsin, Madison 6, Wis., U.S.A.).
- Meteorology*. Fourth Conference on Agricultural Meteorology, with American Society of Agronomy. St. Louis, Mo., 28-29 November 1961. (Executive Secretary, American Meteorological Society, 45, Beacon Street, Boston 8, Massachusetts).
- Meteorology*. Fourth Conference on Applied Meteorology. Atlanta, Ga., 8-11 November 1961. (Executive Secretary, American Meteorological Society, 45, Beacon Street, Boston 8, Massachusetts, U.S.A.)
- Nutrition*. 7th International Convention on Vital Substances and Nutrition. Aachen, Liège, Maastricht, 11-17 September 1961. (Bemeroder Str. 61, Hannover-Kirchrode, Fed. Rep. of Germany).
- Seaweed*. 4th International Seaweed Symposium. Biarritz, 18-25 September 1961. (Monsieur Barriety, Directeur du Centre Scientifique, B.P. 28, Biarritz, Basses-Pyrénées).
- Soil Science*. Conference of Commissions 4 and 5 of the International Society of Soil Science. Massey Agricultural College, Palmerston North, New Zealand, 13-21 November 1962.

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BIOLOGICAL SERIALS RECORD CENTER

The establishment of a Biological Serials Record Center to facilitate communication between scientists has been given first priority by the Biological Sciences Communication Project of the American Institute of Biological Sciences. Unless the scientific intercommunication problem is solved, the committee reports, scientists of the future may find that they are 'buried under printed paper' and that their research is aimed at finding knowledge which already is known.

The Serials Record Center would be charged with the task of collecting and disseminating detailed information regarding all serial or periodical publications in biology. Estimates of the number of these journals range from 25,000 to 50,000. The publications cover all aspects of biological research, including clinical medicine, agricultural sciences, and various botanical and zoological disciplines.

The site of the proposed center, the estimated cost of operations and other details will be determined in the near future. The Biological Sciences Communication Project is headed by Charles W. Shilling. Its office is at American Institute of Biological Sciences headquarters, 2000 P St., N.W., Washington 6, D.C. Members of the project's executive committee include J. Roger Porter, Fred R. Cagle, and Foster Mohrhardt. Lincoln Constance of the University of California is chairman of the advisory committee.

(Source: *Science*: 133 (3456): p. 869, 24 Mar 1961.)

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ABBREVIATIONS

Compiled by

FREDERICK A. BUTTRESS

with the assistance of

CHRISTOPHER BARRETT

(School of Agriculture, Cambridge, England)

Supplement No. 8

AACOBS - Australian Advisory Council on Bibliographical Services
AAG - Afdeling Agrarische Geschiedenis (Netherlands)
AALGC - American Association of Land Grant Colleges and State Universities
AATCC - American Association of Textile Chemists and Colorists
AAUP - American Association of University Professors
ABRO - Animal Breeding Research Organization (U.K.)
ACMET - Advisory Council on Middle East Trade (U.K.)
ADBPA - Association pour le Développement Bibliothèques Publiques en Afrique
AERP - Association Européenne pour la Recherche sur le Pomme de Terre
AFIS - Amministrazione Fiduciaria Italiana della Somalia
AGA - Agrícola Ganadera Antelana (Spain)
AIA - Asociación de Ingenieros Agrónomos (Uruguay)
AICDT - International Advisory Committee on Documentation and Terminology in Pure and Applied Science

AIDBA - Association Internationale pour le Développement des Bibliothèques en Afrique
AMAS - Association Mondiale d'Aviculture Scientifique
ANIPLA - Italian National Association for Automation
APA - American Press Association
APSA - Australian Political Studies Association
ARESA - Association pour le Recherche sur l'Energie Solaire en Algérie
ARGR - Association for Research in Growth Relationships (U.S.A.)
ASAP - American Society of Animal Production
ASTME - American Society of Tool Manufacturing Engineers
AUB - American University of Beirut
BACIE - British Association for Commercial and Industrial Education
BAPP - British Association of Pig Producers
BCAI - British Columbia Artificial Insemination Centre
BCFGA - British Columbia Fruit Growers' Association

BFPC - British Farm Produce Council
BGS - British Grassland Society
BIRF - Brewing Industry Research Foundation (U.K.)
BMUK - Botanical Mission of the University of Kyoto (Japan)
BORAD - British Oxygen Research and Development Association

CAL - Centro di Azione Latina (Italy)
CGLV - Breeders' Plant Licence Administration Fund (France)
CAPA - Selección y Comercio de la Patata de Siembra (Spain)
CAPC - Central American Co-operative Corn Improvement Project
CBE - Conference of Biological Editors
CCIF - Comité Consultatif International Telephonique
CEBEDEAU - Centre Belge d'Etude et de Documentation des Eaux
CEREA - Centre National de Recherches pour l'Etude des Animaux Nuisibles ou Utiles à l'Agriculture (Belgium)
CFAL - Current Food Additives Legislation (U.K.)
CIBC - Commonwealth Institute of Biological Control
CINVA - Inter-American Housing and Planning Centre
CISL - Confederazione Italiana Sindacati Lavoratori
CNDH - Centre National de Documentation Horticole (France)
CNSM - National Confederation of Trade Unions of Mali (Africa)
CODENA - Council for the Development of the North-East of Brazil
CPRI - Central Potato Research Institute (India)
CRPQF - Comissao Reguladora

dos Productos Químicos e Farmacéuticos (Portugal)
CTPS - Permanent Technical Committee for Plant Breeding (France)
CPWD - Central Public Works Department (India)
CTRU - Colonial Termite Research Unit (Nigeria)
CULPAVAL - Cultivadores de Patata Valdivia (Spain)
CUSA - Council for United States Aid (China)
CVD - Veterinary Department, South Cameroons

DASC - Department of Agriculture, Southern Cameroons
DEBEG - Deutsche Betriebsgesellschaft f. Dratlose Telegraphie
DGEC - Dirección General de Estadística y Censos (Nicaragua)
DGFA - Dirección General de Fomento Agrícola (Argentine)
DLIS - Desert Locust Information Service (U.K.)
DSI - General Directorate of State Hydraulic Works (Turkey)
EATITU - East African Tractor and Implement Testing Unit
ECFI - East Caribbean Farm Institute

EIEI - General Directorate of Electrical Surveys Administration (Turkey)
ELF - European Landworkers' Federation (Netherlands)
ENAG - Escuela Nacional de Agricultura y Ganadería (Nicaragua)
ESA - Ethnological Society of America
ESB - Economic Stabilization Board (China)
ESRO - European Space Research Organization
EUCEPA - European Committee for Paper

EVD - Veterinary Department,
Eastern Region, Nigeria

FAGS - Federation of Astronomical and Geophysical Permanent Services

FAR - Federal Department of Agricultural Research (Nigeria)

FIIR - Federal Institute of Industrial Research (Nigeria)

FORMA - Fonds d'Orientation et de Régularisation des Marchés Agricoles (France)

FPC - Flowers Publicity Council (U.K.)

FSAA - Family Service Association of America

FULREAC - Fondation de l'Université de Liège pour les Recherches Scientifiques au Congo et au Ruanda-Rundi (Belgium)

FVR - Federal Department of Veterinary Research (Nigeria)

GDDA - General Desert Development Authority (Egypt)

GEC - General Electric Company (U.K.)

GFDNA - Grain and Feed Dealers National Association (U.S.A.)

IAMAP - International Association of Meteorology and Atmospheric Physics

IAMS - International Association of Microbiological Societies

IAPP - Indian Association for Plant Physiology

IAS - International Association of Seismology and of Physics of the Earth's Interior

IASH - International Association of Scientific Hydrology

ICEF - International Committee for Ethnographic Films

ICIENZ - Imperial Chemical Industries of Australia and New Zealand

ICWA - Institute of Cost and Works Accountants (U.K.)

IFMA - Institutional Food Manufacturers Association (U.S.A.)

IGMB - Instituut voor Graan, Meel en Brood (Netherlands)

IHATIS - International Hides and Allied Trades Improvement Society

ILafa - Instituto Latinoamericano del Fierro y el Acero (Chili)

ILF - International Landworkers' Federation (Netherlands)

IMEKO - International Measurement Conference

IMRAMN - International Meeting on Radio Aids to Marine Navigation

INFONAC - Instituto de Fomento Nacional (Nicaragua)

ISBB - International Society of Bioclimatology and Biometeorology

ISID - Research Institute of the Iron and Steel Industry (France)

IUAT - International Union against Tuberculosis

IVIC - Instituto Venezolano de Investigaciones Científicas

IWDS - International World Days Service

JFRO - Joint Fisheries Research Organization (Rhodesia)

JIDA - Japan Industrial Designers Association

JIDC - Jamaica Industrial Development Corporation

LARC - Libyan-American Reconstruction Commission

LEMIT - Laboratorio de Ensayo de Materiales e Investigaciones Tecnológicas (Argentina)

LUFS - Land Use and Forest Resource Survey of Taiwan (China)

MAER - Ministry of Agriculture, Eastern Region (Nigeria)

MANR - Ministry of Agriculture

Northern Region (Nigeria)
MAWR - Ministry of Agriculture,
 Western Region (Nigeria)
MEPW - Ministry of Economic
 Planning, Western Region
 (Nigeria)
MOPC - Ministerio de Obras Pu-
 blicas y Comunicaciones (Para-
 guay)
MTIN - Ministry of Trade and
 Industry, Northern Region
 (Nigeria)
MTIW - Ministry of Trade and
 Industry, Western Region (Ni-
 geria)

NAH - Ministry of Animal
 Health, Northern Region (Ni-
 geria)
NALCD - National Agricultural
 Library and Centre for Docu-
 mentation (Hungary)
NAPE - National Association of
 Port Employers (U.K.)
NATRED - National Association
 of Television and Radio Firm
 Directors (U.S.A.)
NESC - Nuclear Engineering and
 Science Conference
NISER - Nigerian Institute for
 Social and Economic Research
NIST - National Institute of
 Science and Technology (Phi-
 lippines)
NORAD - North American Air
 Defence
NSDB - National Science Devel-
 opment Board (Philippines)
NSF - National Science Foun-
 dation (U.S.A.)
NTC - Nigerian Tobacco Com-
 pany
NTU - National Taiwan Univer-
 sity (China)
NUM - National Union of Manu-
 facturers (U.K.)
NUS - National Union of Seamen
 (U.K.)

OCLAV - Organisation Commu-

ne de Lutte Anti-Avaire (Afri-
 ca)
OCRS - Organisation Commune
 des Régions Sahariennes (Fran-
 ce)
ONUC - Organisation des Nations
 Unies au Congo Belge
OPOSA - Organizacion de la Pa-
 tata del Pirineo Occidental
 (Spain)
ORANA - Organisme de Recher-
 ches sur l'Alimentation et la
 Nutrition Africaines

PROHUZA - Centre d'Etudes et
 d'Information des Problèmes
 Humains dans les Zones Arides
PROPASI - Productores de Patata
 de Siembra
PWCB - Provincial Water Con-
 servancy Bureau (China)

REIC - Radiation Effects Infor-
 mation Centre (U.S.A.)
RIVON - Rijksinstituut voor
 Veldbiologisch Onderzoek ten
 behoeve van het Natuurbehoud
 (Netherlands)
ROSPA - Royal Society for the
 Prevention of Accidents
 (U.K.)

SACOS - Società Azionaria Cen-
 trali Ortofrutticole Siciliane
 (Italy)
SEMISA - Semillas Seleccionadas
 (Spain)
SEYCO - Selección y Comercio
 de Patata (Spain)
SNC - Société en Nom Collectif
 (France)
SNOF - Société Nationale d'Olei-
 culture de France
SOPEXA - Société pour l'Expor-
 tation des Produits Agricoles
 (France)
SPRI - Scott Polar Research In-
 stitute, Cambridge (U.K.)
SPSF - Syndicat des Pisciculteurs-
 Salmoniculteurs de France

SRDE - Signals Research and Development Establishment, MOS (U.K.)
SREB - Southern Regional Educational Board (U.S.A.)
SUDENE - Superintendency for the Development of the North-East (Brazil)
SWCRD - Soil and Water Conservation Research Division (U.S.A.)
SWIRECO - Southwestern Institute of Radio Engineers Conference and Electronics Show (U.S.A.)
TCEA - Training Centre for Experimental Aerodynamics
TEGMA - Terminal Elevator Grain Merchants Association (U.S.A.)
TFA - Taiwan Forest Administration (China)
TOPRAK - General Directorate of Soil Conservation and Farm Irrigation (Turkey)
TSC - Taiwan Sugar Corporation (China)
UACO - United Africa Company

UCFAF - Union Centrale des Syndicats Agricoles de France
UCLA - University of California at Los Angeles (U.S.A.)
UGAASA - Union General de Autores y Artistas de El Salvador
UKPA - United Kingdom Pilot's Association
UNCEN - Unione Nazionale Comuni ed Enti Montani (Italy)
UNIC - Union Nationale Interprofessionnelle du Cheval (France)
USBGN - United States Board on Geographic Names
VCTV - Verbond der Coöperatieve Tuinbouwveilingen (Netherlands)
WAFRU - West African Fungicide Research Unit
WAMRU - West African Maize Research Unit
WASPRU - West African Stored Products Research Unit
WIRA - Wax Importers and Refiners Association (U.S.A.)

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2. *World agricultural economics & rural sociology abstracts* (issued in co-operation with the International Conference of Agricultural Economists). Quarterly. Amsterdam. North-Holland Publishing Co. Price \$ 8.50 or 32 guilders per annum; discount 20% to members.

3. *World directory of agricultural libraries and documentation centres*, edited by D. H. Boalch; 1960. Pp. 280. Obtainable from: T. P. Loosjes, Agricultural University Library, Wageningen, Netherlands. Price: £ 1.15.0 or \$ 5.00. Discount of 20% to the book trade and to individual members; gratis to institutional members.

4. (In preparation; to be published in 1964). *World list of current agricultural serials*.

5. (In preparation; to be published in 1961). *Primer of agricultural librarianship*.

Membership

The annual subscription for libraries, institutions and associations is \$ 12.50 or £ 4.2.6. per annum; for individuals: \$ 4.00 or £ 1.9.0. All members receive the *Quarterly bulletin* gratis and are granted a 20% discount on *World agricultural economics and rural sociology abstracts*. Other publications are issued gratis to institutional members and with a 20% discount to individual members.

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Note. Some institutions find it convenient to subscribe through a bookseller. Will they kindly notify the Treasurer of this fact, so that they may be recorded in the membership list and qualify for the rights of members.

A Note on the Quarterly Bulletin

The editorial office is at the Library, Rothamsted Experimental Station, Harpenden, Herts., England. Communications regarding it should be sent to Mr. D. H. Boalch at that address.

News in the field of the bibliography and documentation of agriculture and allied subjects is welcomed. Short articles (about 1500 words) and letters to the Editor will be published in the *Quarterly Bulletin* from time to time; these should be in English, French, German, or Spanish. Articles, in whatever language they are written, should have an English summary.

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INTERNATIONAL ASSOCIATION OF AGRICULTURAL LIBRARIANS & DOCUMENTALISTS (I.A.A.L.D.)

Aims

The Association was founded in 1955 to promote, internationally and nationally, agricultural library science and documentation, as well as the professional interests of agricultural librarians and documentalists, the term 'agriculture' being interpreted in its widest sense, so as to include forestry, agricultural engineering, veterinary sciences, fisheries, food and nutrition, and agricultural and food industries. Its membership is over 400, drawn from 60 countries, and its activities include holding a General Assembly (at least once in 5 years), annual meetings of the Executive Committee and meetings of the five Working Committees as occasion demands, and the issuing of publications in the field of agricultural bibliography, documentation and librarianship.

Officers

The Executive Committee consists of: *President*: F. E. Mohrhardt (U.S. Department of Agriculture Library, Washington, D.C.); *1st Vice-President*: S. v. Frauendorfer (Hochschule für Bodenkultur, Vienna); *2nd Vice-President*: D. Kervégant (Service de Documentation, Centre National de Recherches Agronomiques, Versailles); *Secretary*: H. D. Griesau (Forschungsrat für Ernährung, Landwirtschaft und Forsten, Bad Godesberg); *Treasurer*: T. P. Loosjes (Agricultural University Library, Wageningen); *Editor of the Bulletin*: D. H. Boalch (Rothamsted Experimental Station Library, Harpenden, Herts., England); *Members*: Mrs. G. Björkman (Royal Swedish Academy of Agriculture & Forestry Library, Stockholm); Mrs. L. Willam-Engels (Bibliothèque de l'Institut Agronomique de l'Etat, Gembloux, Belgium); Miss M. T. Ronchi (FAO Library, Rome); H. G. Gravenhorst (Bibliotheca, Facultad de Agronomía y Veterinaria, Universidad de Buenos Aires); E. M. Zink (Biblioteca, Instituto Agronômico do Estado de Sao Paulo, Campiñas, Brazil).

Publications

1. *Quarterly bulletin of IAALD*. Harpenden, Rothamsted Experimental Station Library. Retail price £ 4.2.6 or \$ 12.50 per annum; trade discount 20%. Issued gratis to members.

[Continued inside the cover]

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